

**What is claimed is:**

**1. A temperature adjusting device for an LED light source comprising:**

**an LED light source;**

5 **a temperature sensor for detecting an ambient temperature of the LED light source;**

**a cooling fan for cooling the LED light source;**

**a driving circuit for driving the cooling fan; and**

10 **a control unit which on/off controls a voltage to be applied to the cooling fan so as to set the ambient temperature within a predetermined range based upon results of detection by the temperature sensor, characterized in that, upon on/off controlling the applied voltage, the control unit (4) is allowed to gradually raise/lower the applied voltage.**

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**2. The temperature adjusting device for an LED light source according to claim 1, characterized in that the control unit (4) turns the applied voltage on when the ambient temperature exceeds an upper-side switching temperature (T2) that is set at a**  
20 **temperature lower than the upper limit of a temperature permissible range, and also turns the applied voltage off when the ambient temperature is lower than a lower-side switching temperature (T1) that is set at a temperature higher than the lower limit of the temperature permissible range.**

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**3. The temperature adjusting device for an LED light source according to claim 1, characterized in that the LED light source (11) is used for a scanner-use light source for reading frame images of a photographic film.**

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**4. The temperature adjusting device for an LED light source according to claim 3, further comprising:**

**a line-shaped heater (12) that is installed in the LED light source (11), and formed in a line shape along the width direction of a photographic film (F) to be read so as to be aligned adjacent to the LED light source (11) in the line direction,**

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**characterized in that the control unit (4) turns the heater (12) off in synchronism with the turning-on of the LED light source (11), and on/off controls the cooling fan (20) independent of the on/off operations of the heater (12).**

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**5. The temperature adjusting device for an LED light source according to claim 1, characterized in that the LED light source (11) is used for an exposure-use light source for exposing and printing an image onto a photosensitive material.**

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**6. The temperature adjusting device for an LED light source according to claim 1, characterized in that the control unit (4) gradually increases/decreases the applied voltage linearly.**

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**7. The temperature adjusting device for an LED light source**

according to claim 1, characterized in that the control unit (4) gradually increases/decreases the applied voltage in a curved manner.

5           **8. The temperature adjusting device for an LED light source according to claim 1, characterized in that the time period in which the applied voltage is gradually increased/decreased is set to one to two seconds.**

10           **9. The temperature adjusting device for an LED light source according to claim 1, characterized by comprising:**  
              **a red LED light source (11r), a green LED light source (11g), a blue LED light source (11b) that constitute a LED light source (11);**  
              **a red LED guiding portion (13r), a green LED guiding portion**  
15           **(13g) and a blue LED guiding portion (13b) that guide light rays applied from the respective light sources (11r, 11g, 11b); and**  
              **a joining portion (13a) that allows the respective guiding portions to join to one another.**

20           **10. The temperature adjusting device for an LED light source according to claim 1, characterized in that the LED light source (11) is a white-color LED.**